Listing of Claims

1. (Original) An electromagnetic coupling comprising:

a first conductor;

a conductive enclosure enclosing a cavity, wherein the first conductor is inserted into the cavity through a first opening in the enclosure;

a ground plane within the cavity, the ground plane and the conductive enclosure defining a resonant slot therebetween, wherein the first conductor is electrically connected to the ground; and

a second conductor inserted into the cavity through a second opening in the enclosure;

wherein the conductors are on respective opposite sides of the ground plane within the cavity; and

wherein the first and second conductors are electromagnetically coupled with one another via the ground plane and the resonant slot.

2. (Original) The electromagnetic coupling of claim 1, wherein the second conductor is substantially perpendicular to the first conductor.

3. (Original) The electromagnetic coupling of claim 1, wherein the first conductor is an inner conductor of a coaxial cable.

4. (Original) The electromagnetic coupling of claim 3, wherein an outer conductor of the coaxial cable is attached to at least a part of the conductive enclosure.

5. (Original) The electromagnetic coupling of claim 1, wherein the second conductor is attached to an insulator substrate which is enclosed by a ground conductor.

6. (Original) The electromagnetic coupling of claim 5, wherein the ground conductor is attached to at least a part of the conductive enclosure.

7. (Original) The electromagnetic coupling of claim 1, wherein the second conductor is part of a stripline.

8. (Original) The electromagnetic coupling of claim 7, wherein the stripline is a suspended air stripline.

9. (Currently Amended) The electromagnetic coupling of claim 1, wherein the ground plane is electrically coupled ~~conducted~~ to the conductive enclosure.

10. (Original) The electromagnetic coupling of claim 1, wherein the coupling includes a first connector coupled to a second connector; wherein the first connector includes the first conductor and a first part of the enclosure; and wherein the second connector includes the second conductor and a second part of the enclosure.

11. (Original) The electromagnetic coupling of claim 10, wherein one of the connectors includes a connection plate for linking the connectors together.

12. (Original) The electromagnetic coupling of claim 1, wherein the cavity is a substantially cylindrical cavity.

13. (Previously Presented) The electromagnetic coupling of claim 12, wherein the slot extends most of the way along an outer border of the cavity.

14. (Original) The electromagnetic coupling of claim 13, wherein the slot has a substantially annular shape.

15. (Original) The electromagnetic coupling of claim 12, wherein the cavity preserves a coaxial transverse electromagnetic (TEM) wave mode in the first conductor

16. (Original) The electromagnetic coupling of claim 1, further comprising a rotational coupling operatively configured to allow the first conductor to rotate relative to the second conductor.

17. (Original) The electromagnetic coupling of claim 16, wherein the rotational coupling is a gimbal coupling a first part of the conductive enclosure to a second part of the conductive enclosure.

18. (Original) The electromagnetic coupling of claim 1, wherein the first conductor is soldered to the ground plane.

19. (Original) The electromagnetic coupling of claim 1 as part of a missile antennae system.

20. (Original) An electromagnetic coupling comprising:

a first conductor;

a conductive enclosure enclosing a cavity, wherein the first conductor is inserted into the cavity through a first opening in the enclosure;

a ground plane within the cavity, the ground plane and the conductive enclosure defining a resonant slot therebetween, wherein the first conductor is electrically connected to the ground;

a second conductor inserted into the cavity through a second opening in the enclosure;

a first connector that includes the first conductor and a first part of the enclosure; and

a second connector that includes the second conductor and a second part of the enclosure;

wherein the conductors are on respective opposite sides of the ground plane within the cavity;

wherein the first and second conductors are electromagnetically coupled with one another via the ground plane and the resonant slot;

wherein the second conductor is substantially perpendicular to the first conductor.

21. (Canceled)